

# Weekly Report (2014.05.05-2014.05.11)

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## 1. Mobile Data

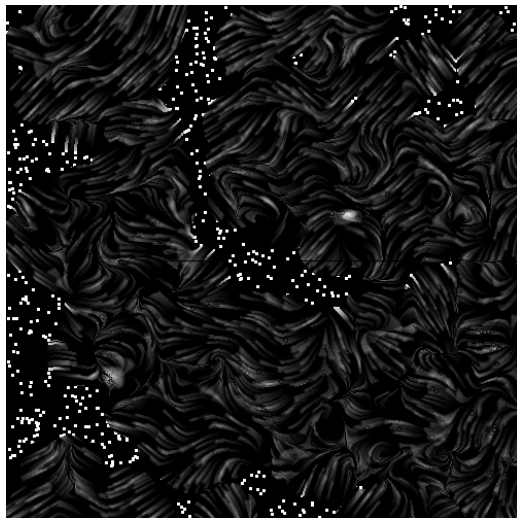
This week I mainly focused on visualization of the vector field generated by the mobile data.

### 1. Generation of the vector field

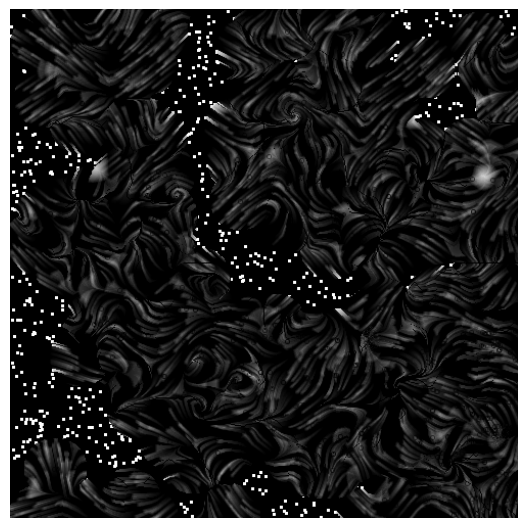
A record that recorded a user goes from one base to another is treated as a connection between the two bases. We counted the amount of connections between each pairs of bases. If there are connections between base A and base B and the amount is positive, then a vector from A to B is generated and the amount is regard as the mode of the vector.

### 2. OLIC

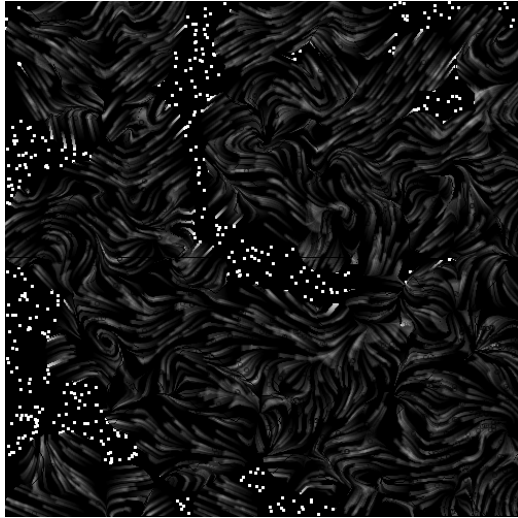
I firstly tried the traditional LIC algorithm but the directions of vectors are missing in the visualization result. I found two ways to solve the direction problem, one is shift the phase of kernel function, and the other is OLIC. The first way didn't work because when I shift the phase there is no significance change between each frame. The results of OLIC seem to be acceptable. I generated the vector field for each half an hour. The following pictures are the results from 6:30 AM to 10:00 AM.



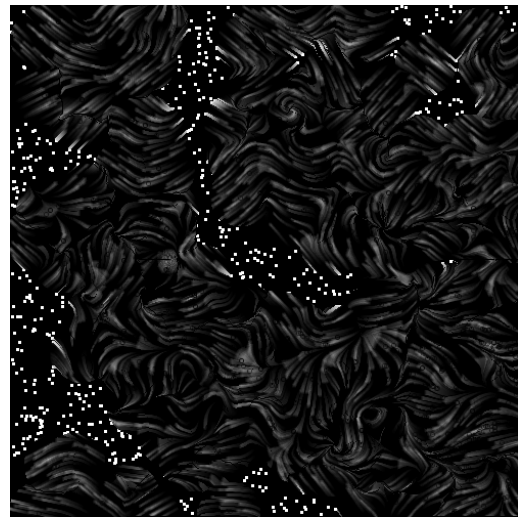
6:30



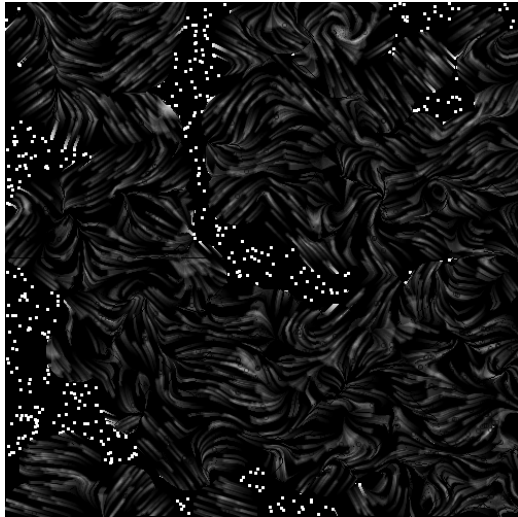
7:00



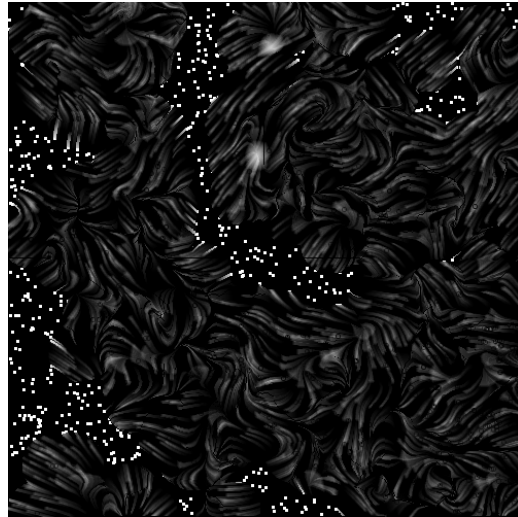
7:30



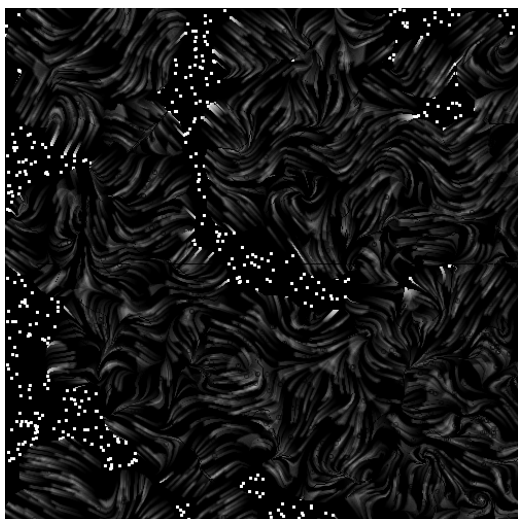
8:00



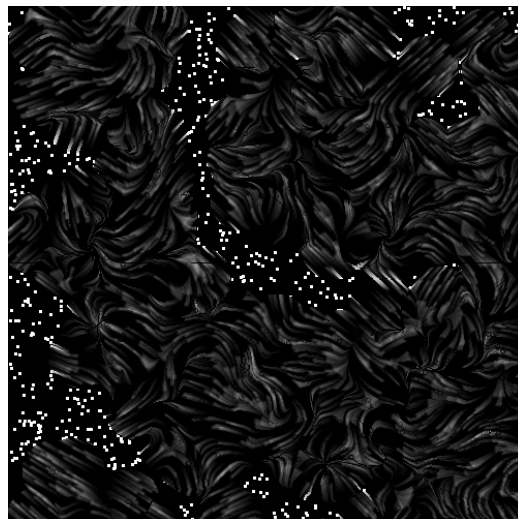
8:30



9:00



9:30



10:00

The big white spots that appear at 7:00 and 9:00 shows people are gathering at these spots.

## **2. Application for visiting to HKUST**

The application is sent to HKUST this week.